

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATENT APPLICATION

Byron Hua Chen et al.

Case

9-7-4-5

Serial No.

09/391123

Filed

September 7, 1999 2695

Examiner

C. R. Craver

Group Art Unit

Batch No.

Allowed

12/31/2002

Title A Satellite-Based Location System Employing Dynamic Integration Techniques

ASSISTANT COMMISSIONER FOR PATENTS WASHINGTON, D. C. 20231

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MAR 1 8 2003

SIR:

Technology Center 2600

ATTENTION: Patent Office Draftsperson

In response to the Notice of Allowability of December 31, 2002, attached is 1 sheet of formal drawing.

In the event of any non-payment or improper payment of a required fee. the Assistant Commissioner is authorized to charge or to credit Lucent Technolgies Deposit Account No. 12-2325 as required to correct the error.

Respectfully,

Byron Hua Chen et al.

By (Jimmy Goo

> Reg. No. 36528 973-386-6377

Att:

1 Sheet(s) Formal drawing(s)

03/06/03

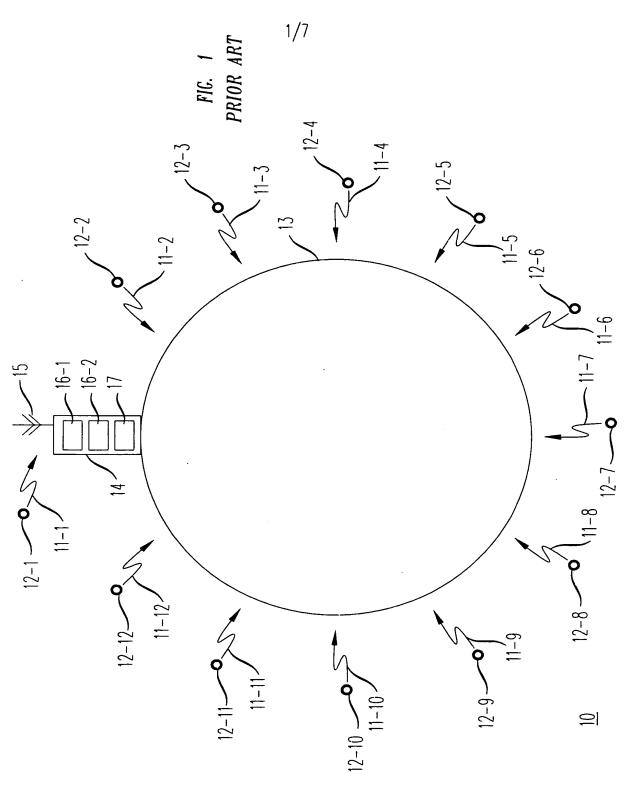
Lucent Technologies Inc.

Docket Administrator - Rm 3J-219 101 Crawfords Corner Road

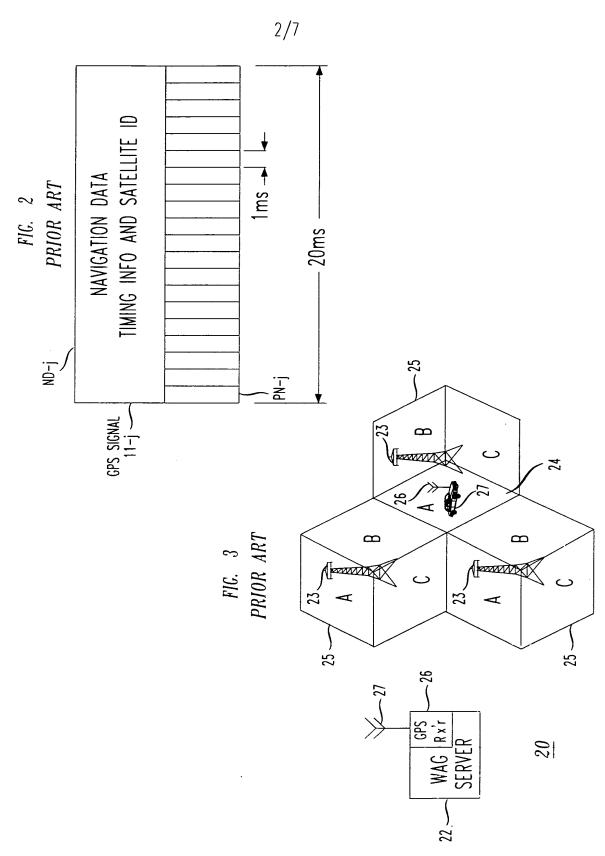
Holmdel, NJ 07733

GROUP 3600











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300 FIG. 4 PRIOR ART WAG SERVER DETECTS 310 PLURALITY OF GPS SIGNALS 11-j

> WAG SERVER Rx INFO 315 RE SECTOR IN WHICH WAG CLIENT IS LOCATED

WAG CLIENT ESTIMATES 320 POSITION OF WAG CLIENT

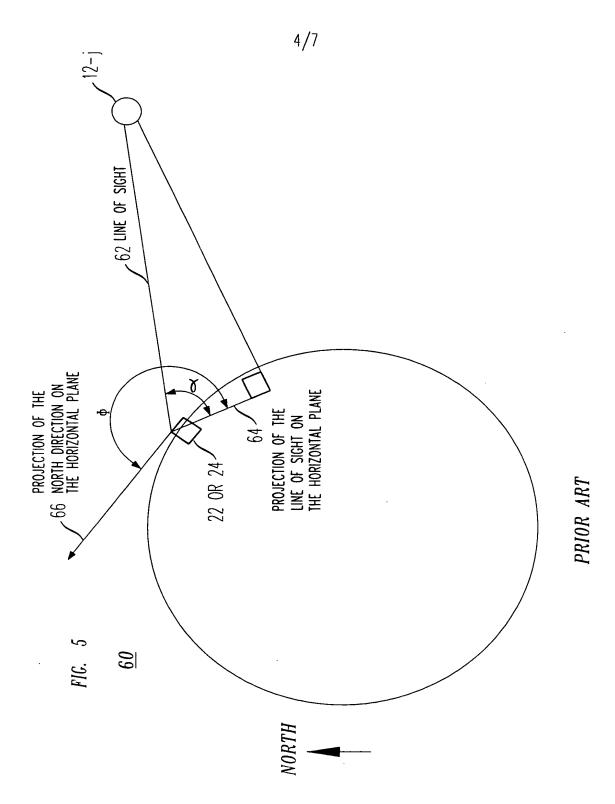
FOR EACH DETECTED SATELLITE, WAG SERVER PREDICTS A FREQUENCY - 330 fi(r) AND A CODE PHASE SEARCH RANGE R BASED ON INITIAL ESTIMATE

WAG SERVER Tx 340 SEARCH MESSAGE TO BASE STATION

> BS Tx SEARCH - 350 MESSAGE TO WAG CLIENT

WAG CLIENT PERFORMS PARALLEL SEARCH FOR GPS SIGNALS 11-j 360 INDICATED IN SEARCH MESSAGE WITHIN CONFINES OF PREDICTIONS







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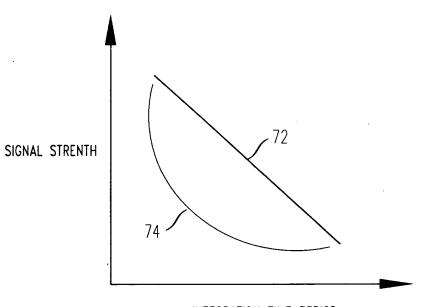
		5/7 FIG. 6 <u>600</u>
STEP	605	WAG client receives a search message
STEP	610	WAG client uses the search message to pick a first satellite to search based on a set of first satellite selection criteria
STEP	620	Determine an integration time period (ITP) for the first satellite
STEP	625	WAG client searches for the first satellite for the associated determined ITP using a first set of parameters indicated in the search message for the first
STEP	630	WAG client predicts a fast area where WAG client may be located using information obtained upon detecting a signal transmitted from the first satellite
STEP	640	WAG client uses the search message to pick a second satellite to search based on a set of second satellite selection criteria
STEP	645	WAG client redefines a code phase search range indicated in the search message for the second satellite using the first predicted area
STEP	648	Determine an integration time period for the second satellite
-		
STEP	650	WAG client searches for the second satellite far the associated determined ITP using a second set of parameters indicated in the search message and the redefined code phase search range for the second satellite
STEP	655	WAG client predicts a second area where WAG client may be located using information obtained upon detecting a signal transmitted from the second satellite
		<u> </u>
STEP	660	WAG client redefines code phase search ranges indicated in the search message for the remaining satellite using the first and second predicted areas
		•
STEP	665	Determine an integration time period for the remaining satellites
STEP	670	WAG client searches for the remaining satellites for the associated determine ITPs using a third set of parameters indicated in the search message and the redefined code phase search ranges for the remaining satellites
STEP	680	WAG client determines a position using information obtained upon detecting signals transmitted from the first, second and at least one of the remaining satellites

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FIG. 7

<u>70</u>



INTEGRATION TIME PERIOD

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